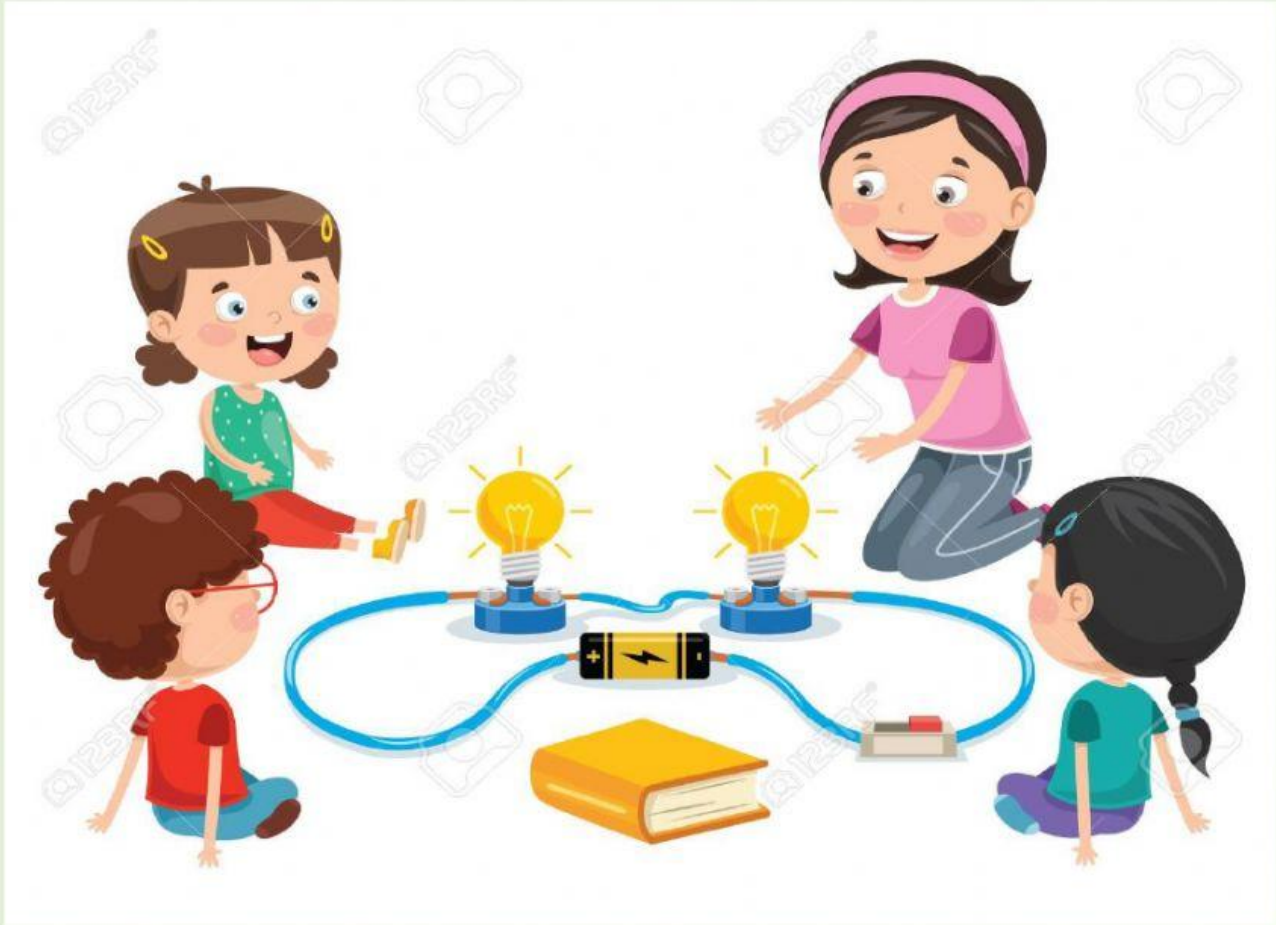




SCIENCE
CHAPTER 7- ENERGY
LESSON 4- ELECTRICITY
PART 1



Created by- Nisha Tanwar

WHAT IS ELECTRICAL CHARGE?

- ❖ An electrical charge gives us electricity
- ❖ It is a property of matter
- ❖ We cannot see it, smell it, or weigh it.

POSITIVE AND NEGATIVE PARTICLES

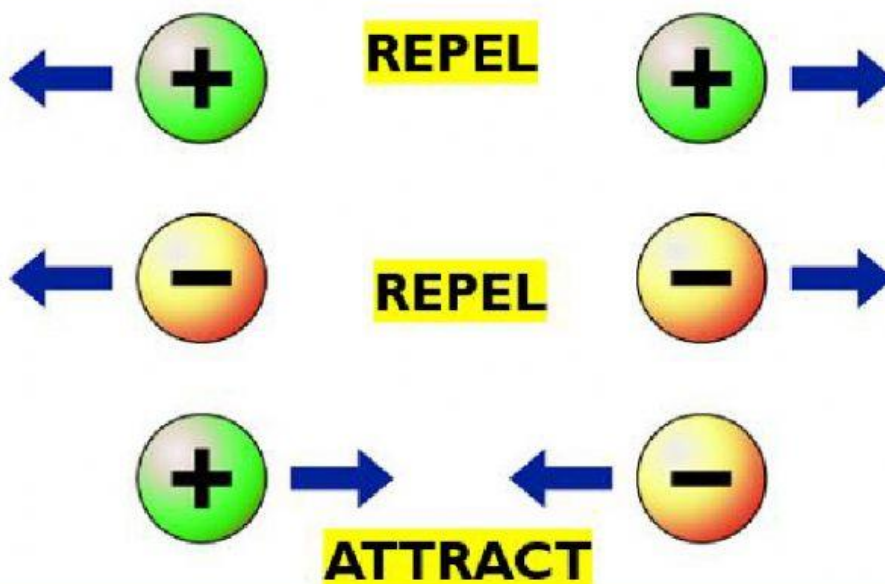
TYPES OF CHARGES



POSITIVE CHARGE



NEGATIVE CHARGE



- ❖ A **positive charge** and a **negative charge** attract or pull towards each other
- ❖ Positive does not attract positive
- ❖ Negative does not attract negative
- ❖ Neutral charges do not have a buildup of charges

STATIC ELECTRICITY

Buildup of electrical charges on an object

STATIC ELECTRICITY

The build up of electrical charges on an object is called **static electricity**.

Rubbing objects together produces more static electricity



WATCH VIDEO ABOUT ELECTRIC CHARGE

HOW DO CHARGES INTERACT

When two objects touch, charged particles can move from one object to the other. Negative charges move more easily than positive charges do.

Suppose you rub a balloon with a wool cloth. Negative charges move from the wool to the balloon. The balloon is left with a buildup of negative charges. A *buildup* means something has more of one kind of charge than the other. The wool has a buildup of positive charges.

← PLEASE READ



Overall Charge



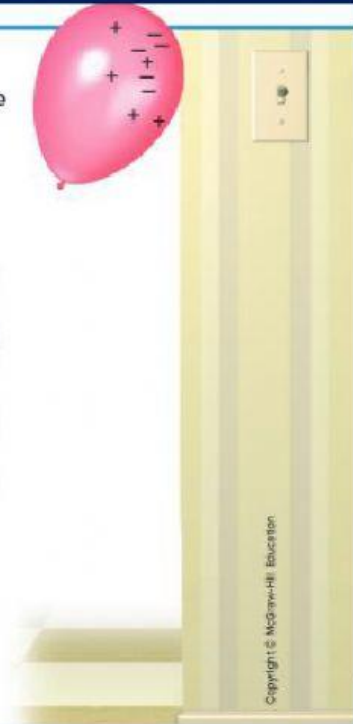
- ① A balloon and a wool cloth are neutral. Each has as many negative charges as positive charges.



- ② By rubbing the balloon with the wool, negative charges build up on the balloon.



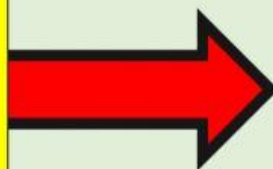
- ③ The negative charges on the balloon attract the positive charges on the wall. The balloon sticks to the wall.



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WATCH VIDEO ABOUT INTERACTION OF CHARGES

CLICK ON BULB ICON TO
EXPLORE LAB ABOUT
INTERACTION OF CHARGES



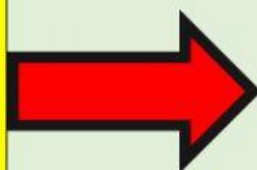
ELECTRICAL DISCHARGE

When you move across a carpet, negative charges rub off the carpet onto you. Your body gets a buildup of negative charges.

The charges keep building until you touch something. Then they move to whatever you touch. This fast movement of charge is called a **discharge**. You might feel the discharge as a small **shock**. You might even see or hear it.



CLICK ON ICON TO EXPLORE
LAB ABOUT ELECTRICAL
DISCHARGE



LIGHTNING

It is the discharge of static electricity during storm

- Inside the storm cloud, ice, and water rub against each other.
- Some pick up positive charges and move to the top of cloud.
- Negative charges move to the bottom.
- If the build up gets large enough, charges move to the ground as lightning.



QUESTIONS FROM BOOK

1. Like charges _____ each other.
2. Unlike charges _____ each other.

3. Fast movement of charge is called

4. Build up of electrical charge on an object is called _____ electricity.

5. Electrical charge gives us _____.

6. When you rub your foot on carpet, _____ charges build up inside your body.